INDIANA DEPARTMENT OF TRANSPORTATION

PUBLIC HEARING

Draft Environmental Impact Statement (DEIS)

Hoosier Heartland Highway:

SR 25 from Interstate 65 Interchange to US 24

Tippecanoe, Carroll, and Cass Counties, Indiana

October 1, 2002	October 2, 2002	October 3, 2002
6:00 PM – 8:00 PM	**6:00 PM – 8:00 PM**	**6:00 PM – 8:00 PM**
Vinton Elementary School	**Delphi Community High School**	**Logansport High School**
3101 Elmwood Avenue	**501 Armory Road**	**1 Berry Lane**
Lafayette, Indiana	**Delphi, Indiana**	**Logansport, Indiana**

The purposes of this public hearing are to present the Draft Environmental Impact Statement for the above-referenced project, and to obtain input from the community. Your comments are welcome and may be submitted in any of the following ways:

- **Have your statements recorded either during or immediately following the formal portion of this hearing.**
- **Complete and submit the comment sheet (last page of handout) this evening.**
- **Mail comments (using the attached comment sheet or any format of your choice) to one of the following:**

Mr. Ron Adams
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- **Email written comments to**: rwade@qk4.com

Comments will be received through November 1, 2002. All comments received during that time will be given the same consideration as those received tonight.

INTRODUCTION: The Indiana Department of Transportation is studying the need to improve the transportation corridor beginning east of the SR 25/I-65 interchange in Lafayette and terminating at US 24 in Logansport—approximately 33 miles through Tippecanoe, Carroll, and Cass Counties, Indiana. The *Draft Environmental Impact Statement (DEIS)* has been submitted with the No-Build Alternative and four build alternatives under consideration. Upon selection of the Preferred Alternative, the *Final Environmental Impact Statement (FEIS)* will be submitted.

PURPOSE AND NEED: This project—part of a planned Heartland Industrial Corridor improvement from Lafayette, Indiana, to Toledo, Ohio—will complete the 99-mile Hoosier Heartland Highway from Lafayette and Fort Wayne.

PURPOSE—Provide a critical link in the Heartland Industrial Corridor, a regional facility that will serve traffic, a safe facility, and a facility that meets current design standards.

NEED—

- Reduce congestion and improve the efficiency and capacity of transportation between Lafayette and Logansport.
- Improve safety and meet current design standards.
- Enhance the regional and local transportation network.
- Implement federal legislation and respond to the designation of SR 25 as a Statewide Mobility Corridor in INDOT's Long-Range Plan.

EXISTING ROADWAY CONDITIONS: The existing SR 25 is a two-lane facility, constructed circa 1931. Deficiencies along the 33-mile-long Lafayette-to-Logansport corridor include:

- Insufficient capacity
- Inadequate shoulders and lateral clearances
- Poor alignment west of Delphi
- 140+ driveway entrances
- 80+ public road intersections
- At-grade railroad crossings

EXISTING AND PROJECTED TRAFFIC: The project design year is 2030. Given the No-Build scenario, traffic volumes on SR 25 are as follows:

Location	Existing (Year 2000)	Projected (Year 2030
SR 25/I-65 to CR 450N	21,600	29,000
CR 450N to Main Street, Delphi	7,700–15,500	11,700–23,400
Delphi to Logansport	4,400–6,800	6,500–8,600

PROJECT DESCRIPTION: Design features include:

- 4-lane divided highway from SR 25/I-65 interchange in Lafayette to US 24 in Logansport.
- Depressed median + inside shoulders (approximately 80 feet in width).
- 55 mph from I-65 interchange to the former Aretz Airport; 70 mph to US 24.
- No at-grade railroad crossings. New SR 25 would bridge railroad crossings to eliminate conflicts.
- Several public crossroads would be reconstructed to bridge railroad tracks, or closed to through traffic, eliminating up to 17 railroad crossings.
- Connections to public crossroads via at-grade intersections, or connecting roads where public crossroads overpass the highway.
- Signalization would be examined for the intersections at SR 25 / Burlington Avenue, existing and proposed SR 25 at I-65 ramps, and at SR 218.

ALTERNATIVES CONSIDERED:

BUS AND RAIL—The ability of bus and rail transit to provide an alternative means of meeting transportation demands in the project area was considered and rejected. Bus: The study corridor is primarily rural, and housing and employment are widely dispersed. Long routes and numerous stops would not be convenient, attractive to potential ridership, or financially feasible. Rail: Frequency of freight trains at crossings delays and disrupts the traveling public, farm operations, and emergency response traffic. There is insufficient demand for passenger service, and the existing rail system could not handle passenger service through this corridor because of the high volume of freight traffic.

TRANSPORTATION SYSTEM MANAGEMENT—Improvements to intersections, minor alignment shifts, and other TSM measures would not correct deficiencies, increase capacity, or improve safety along the roadway sufficient to meet the purpose and need.

NO-BUILD ALTERNATIVE—Under the No-Build Alternative, INDOT would not proceed with the project, and there would be no acquisition of additional right-of-way, no displacements of homes or businesses, and no expenditures for new construction, though there would be expenses associated with the maintenance of the existing roadway. The No-Build Alternative may be expected to result in worsened conditions for fast, safe, efficient, and economical (time and money) vehicular traffic movement.

BUILD ALTERNATIVES—The identification and evaluation of build alternatives were the most important and critical steps of the study. Any alternative that could meet the project's purpose and need was given consideration. Starting from a wide range of corridors and potential alignments, the number was narrowed down to several preliminary alternatives as more detailed information was collected and analyzed. For ease of reference and analysis, the project area was divided into four major segments—Western, Central, Eastern, and Logansport—each of which contained two or more preliminary alternatives (identified by the colors Orange, Purple, Yellow, and Teal). All preliminary alternatives are identified below. Those advanced for further analysis are briefly described.

- ***Western Segment—***From east of the existing SR 25/I- 65 interchange in Tippecanoe County to just east of CR 900W in Carroll County, five build alternatives were identified. Orange-West A and A1 (O-WA and O-WA1) were retained for further study. Purple-West (P-W), Teal-West (T-W), and Orange-West B (O-WB) were eliminated because they failed to provide traffic relief on existing SR 25 and/or had notable farmland/ environmental impacts.

  O-WA: This alternative parallels the railroad approximately 1,000 feet north, complying with INDOT's desired 1,000-foot criterion for mainline highway separation from at-grade railroad crossings. O-WA was advanced because the alternative provides:

  - ✓ An acceptable level of service and traffic relief on existing SR 25, and serves local communities.
  - ✓ A 1,000-foot separation north of the tracks.
  - ✓ Less potential than alternatives nearer the Wabash River for impacting archaeological resources, quality forest areas, wetland communities, and the federally endangered species—the Indiana bat. The U.S. Fish and Wildlife Service (USFWS) strongly supported both O-WA/A1 over alignments farther north.

  O-WA1: The Tippecanoe County Area Plan Commission (APC) opposed the O-WA alignment because of its potential agricultural impacts. As a result of input from the APC and the public, this variation of the O-WA alignment was developed. The alignment is similar to O-WA, but whenever possible is adjacent to the railroad right-of-way and uses grade separations for rail crossings of the intersecting local public roads. This alternative was advanced because it provides:

  - ✓ An acceptable level of service and traffic relief on existing SR 25, and access to local communities.
  - ✓ Less potential for impacting sensitive resources owing to distance from the Wabash River. The USFWS supported both O-WA/A1 alignments.
  - ✓ "Next-to-rail" alignment for analysis that is compatible with the county's amended *Thoroughfare Plan,* which is part of the *Comprehensive Plan.*

- ***Central Segment—***From east of CR 900W to just east of CR 400W in Carroll County, six alignments were considered. Purple-Central A1 and A2 (P-CA1 and P-CA2) were carried forward. Purple-Central A and B (P-CA and P-CB), and Teal-Central A and B (T-CA and T-CB) were eliminated for failing to meet purpose and need, impacting Delphi Swamp, and/or affecting archaeological/historical resources eligible for listing on the National Register of Historic Places (NRHP).

  P-CA1: This alignment mirrors that of P-CA2 until just west of CR 400W, where it enters the right-of-way of existing SR 25 and remains north of the railroad, connecting to P-EA in the Eastern Segment. P-CA1 was carried forward because the alternative:

  - ✓ Relieves traffic, improving the level of service (to C and B) on existing SR 25 through most of the area, and provides a link between new SR 25 and Main Street in Delphi.
  - ✓ Responds to P-CA/B's impacts to the Rural Historic District, Delphi Swamp and Deer Creek by shifting westward to avoid the district and

improve the Deer Creek crossing, and modifying the intersection with SR 218 to avoid Delphi Swamp. The alternative would have a visual impact on the district, but its distance from the district (approximately 1,300 feet), the topography in the area, and the Section 106 "consulting party" mitigation process will minimize the impact.

- ✓ Reduces impacts the Deer Creek Commerce Center
- ✓ Has the support of local officials because of its reduced impacts and because it provides for another primary entrance into Delphi via construction of a new connecting road.

P-CA2: This alignment mirrors P-CA1 to west of CR 400W, where it heads south across the railroad track, then eastward paralleling the railroad and existing SR 25 on the south side. This alignment provides a connection to P-EB in the Eastern Segment. Because it accomplishes the same goals as P-CA1 regarding reducing/ avoiding impacts to sensitive resources and the commerce center while providing a new entrance to Delphi, local official also support this alignment.

■ ***Eastern Segment—***From east of Carroll CR 400W to Cass CR 300S, both studied alignments—Purple-East A and B (P-EA and P-EB)—were advanced.

P-EA: This alignment follows the north side of the railroad and uses a portion of the existing SR 25 right-of-way, except where the alignment curves north to bypass Rockfield, Burrows, and Clymers to the north. P-EA was carried forward because the alternative:

- ✓ Provides traffic relief and improved level of service on existing SR 25, and improved system linkage.
- ✓ Avoids environmental or other constraints that would require their elimination.
- ✓ Uses existing right-of-way, thereby lessening land acquisition costs and impacts to property owners.
- ✓ Eliminates some of existing SR 25, thus reducing maintenance costs for jurisdictions that will assume the responsibility for the remainder of the existing roadway.
- ✓ Is compatible with long-term land use plans and has the support of local officials.

P-EB: This alignment follows the south side of the railroad except where the alignment curves south to bypass Rockfield, Burrows, and Clymers. This alignment does not use any section of the existing SR 25 right-of-way. The alignment was advanced because the alternative:

- ✓ Provides traffic relief and improved level of service on existing SR 25, and improved system linkage.
- ✓ Avoids major environmental or other constraints.

■ ***Logansport Segment—***From CR 300S to the connection to US 24 in Logansport, six alignments were initially considered. Yellow-Logansport A and B (Y-LA and Y-LB) were carried forward. Purple-Logansport A and B (P-LA and P-LB), and Teal-Logansport A and B (T-LA and T-LB) were eliminated primarily because they had little local support, had more potential environmental impacts, and had more adverse impacts to businesses.

Y-LA/ Y-LB: The alternatives share a common alignment for most of their length and have two possible western termini: "A" connects with P-EA, which is north of existing SR 25 and the railroad, and "B" connects with P-EB, which is to the south. The alternatives were advanced because they:

- ✓ Provide level of service LOS C and relief from traffic on existing SR 25
- ✓ Provide local system linkage.
- ✓ Are included in the local planning initiatives—including the recently (February 11, 2002) adopted amendment to the *Comprehensive Plan*, the *City of Logansport, Thoroughfare Plan*—in part because its connection to Burlington Avenue will give Logansport a primary entranceway and connection to a major highway.

FEASIBLE ALTERNATIVES ADVANCED: Following the analysis of design considerations and environmental constraints, and the elimination of several preliminary alignments, the remaining alignments within each of the four major segments were combined, in all ways feasible, to form four build alternatives that extend from the western terminus at the I-65 interchange to the eastern terminus at US 24.

No-Build Alternative

Build Alternatives—The build alternatives identified below and shown on Exhibit combine one alignment from each of the four segments developed for purposes of the preliminary analyses.

Name	Combination	Length (Miles)	Estimated Cost
Alternative 1	**O-WA + P-CA1 + P-EA + Y-LA**	**35.3**	**$182 million**
Alternative 2	**O-WA1 + P-CA1 + P-EA + Y-LA**	**35.4**	**$188 million**
Alternative 3	**O-WA + P-CA2 + P-EB + Y-LB**	**35.2**	**$178 million**
Alternative 4	**O-WA1 + P-CA2 + P-EB + Y-LB**	**35.3**	**$185 million**

SUMMARY OF ENVIRONMENTAL IMPACTS:

LAND USE—Construction of a build alternative would require the acquisition of approximately 1,500 acres of additional right-of-way. The majority of the land that would be acquired is in agricultural use, followed by rural-residential uses interspersed with residential neighborhoods near Lafayette, Delphi, and Logansport. In the predominantly rural areas, substantial land use changes are neither proposed in existing land use plans nor supported by most local residents. The project is anticipated and included in local land use initiatives. Development that may take place as a result of the project most likely would occur in areas designated for development in local land use plans, and near the new roadway's at-grade intersections with public crossroads, particularly those near communities. Future land use changes would be subject to controls through the comprehensive plans and zoning regulations in place, and/or approval of city and county officials.

IMPACTS ON AGRICULTURAL LANDS— About 1,000 acres of farmland would be acquired for right-of-way—less than 0.2 percent of agricultural land in the three counties in the project area. Farm severances would also occur, and some severed parcels would be too small to support productive farming. Efforts were made to reduce severances by locating build alternatives near existing rail/roadway corridors. Other indirect impacts to farmland could include loss of some farmland to development. Local planning officials are very supportive of maintaining agricultural land use, and the control of development is within each local government's jurisdiction through land use planning, and subdivision and zoning regulations.

SOCIAL IMPACTS—None of the alternatives would have a disproportionate impact to pockets or groups of minorities, elderly, low-income, non-driver, or transit-dependent, or handicapped individuals, in accordance with *Executive Order 12898*, *Environmental Justice*. The project would not cause major disruptions to subdivisions or platted neighborhoods, cause major divisions to communities, or displace a sizeable number of residents or businesses. Some impact to community cohesion could be experienced in rural areas where housing is adjacent to public roads. Though these residences are generally few in number, a "neighborhood" sense of cohesion can develop, and loss of one or two residences to right-of-way acquisition could cause notable disruption. Impacts may also be experienced by rural residents on scattered sites and in towns such as Buck Creek and Colburn, where a new four-lane roadway could be viewed as both a physical and a psychological barrier between them and their neighbors and service providers. Other social impacts are generally related to travel time and access. With any build alternative, some public crossroads would overpass the new SR 25 and the railroad, or be closed. The closing of crossroads would lengthen travel time to/from some local destinations, while overpassing the railroad would improve travel time. The new road would improve travel time between communities, and reduced traffic on those portions of existing SR 25 that will remain open would have a similar benefit. Changes in access for school bus routes will be discussed with the school systems well in advance so routes can be adjusted in a timely manner. Where roads are dead-ended, provisions for school bus turnarounds will be considered during final design. Emergency responders and local public officials identified critical routes recommended to remain open, and the build alternatives were designed to address these recommendations. The consensus among the emergency response agencies was that shorter trips with quicker response times would be the predominant effect of the project.

RELOCATION/DISPLACEMENT IMPACTS—The estimated number of residential relocations range from 21 (Alternative 4) to 34 (Alternative 1). Research indicates that sufficient comparable, decent, safe, and sanitary housing will exist when right-of-way is acquired, if a build alternative is selected; therefore, it is likely the relocations could be accomplished using normal relocation procedures. Potential business displacements are as follows: Auto Express Car Wash, Mark L. Abbott Heartland Hogs, Watson Construction and J.W. Rentals (same ownership and location), Tri-State Cob Limited, Tasler, Inc., and Homberg Hogs and PHT, Inc. (same ownership and location). Alternatives 1 and 2 would potentially displace five of these businesses and Alternatives 3 and 4 would potentially displace seven. Company spokespersons have indicated their businesses could remain at the same site or relocate within the area, and no business closings or reduction in the number of employees were anticipated. In some cases, business expansion was considered possible. The Carroll County office of the Family and Social Services Administration's Division of Family and Children operates from a leased building that is in the right-of-way of all build alternatives (which share an alignment in this area). An agency spokesperson said discussions have been held with Delphi government officials regarding potential relocation sites.

INDOT offers a Relocation Assistance Program in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* (Public Law 91-646), as amended in 1987.

ECONOMIC IMPACTS—Local officials and planning agencies have long supported the project for its development potential. Though several businesses could be displaced, most could relocate in the immediate area. Where the proposed new road would be on new alignment, some development at public crossroads along the new route would occur, as would some loss of revenue by businesses along the existing route. The fact that the local communities' economic development/land use plans include the completion of the Hoosier Heartland Highway indicates that the local jurisdictions believe the project long-term economic benefits would outweigh any short-term impacts.

TRAILS AND BIKEWAYS—The proposed project would be a high-speed, partial-access-controlled facility; therefore, no on-road bike routes or pedestrian sidewalks/trails would be provided. Three established, on-road bike routes—the Colburn Loop, the Wabash-Wildcat Region Bikeway, and the Wabash Valley Route 2—would be crossed at various locations by build alternatives. Alternatives 1 and 3, on shared alignment, would impact the Wabash-Wildcat route by relocating a section of Tippecanoe CR 900N, thereby causing bicyclists to travel approximately one-half mile along existing SR 25 to connect with the route. Based on the Federal Highway Administration's (FHWA) Section 4(f) Policy, June 7, 1989, this change would not require Section 4(f) involvement because the bikeway occupies the road right-of-way but is not limited to any specific location within that right-of-way. Three potential hiking trails in the Delphi area would be equally affected by the build alternatives. These potential trails, which are being proposed by a local organization, traverse private properties and are not open to the public. The build alternatives are on common alignment that does not provide for uninterrupted access to the proposed trails. Owing to the required bridging of Deer Creek, it is probable that bridge clearance would be sufficient to avoid interrupting access. Since the trails are not on public land or open to the public, potential impacts to them would not have Section 4(f) involvement.

AIR QUALITY IMPACTS—Pursuant to the 1990 *Clean Air Act Amendments*, Tippecanoe, Carroll, and Cass Counties have never been designated as non-attainment areas for transportation-related pollutants. The project:

- Is in an air quality area that does not require transportation control measures.
- Is not expected to adversely affect the air quality within the Wabash Valley Intrastate Air Quality Control Region.
- Is in compliance with the State Implementation Plan for the Attainment and Maintenance of National and State Ambient Air Quality Standards.

By improving the flow of traffic through the area, the project would not be expected to adversely impact air quality, though some pollutant emissions would result where the road is on new alignment.

NOISE IMPACTS—The new road will result in higher noise levels, particularly where it traverses relatively quiet rural areas. However, the projected decrease in traffic on existing SR 25 as a result of the new road would result in notable decreases in noise levels at the majority of locations analyzed. With the No-Build scenario, future noise level projections show an increase over existing levels at one site—an NHRP-eligible farmhouse near Logansport.

ENERGY IMPACTS—The construction of a transportation facility represents a considerable one-time energy resources demand, both in materials fabrication and actual construction activities. The combined cost reduction factors (e.g., improved access, travel time, and safety) would make the operational cost of any of the build alternatives less than, or equivalent to, the operational cost of the No-Build Alternative. Therefore, in the long run, the operational savings of any one of the build alternatives would offset the construction energy requirements, and result in future net energy savings.

WATER QUALITY IMPACTS—

STREAMS: The project will cross several major, minor and intermittent streams. The total length of stream crossings varies little among alternatives. The final design will be submitted to the U.S. Army Corps of Engineers (USACE) to obtain an Individual Section 404 Permit and to the Indiana Department of Environmental Management (IDEM) for Section 401 Water Quality Certification. The operation of the proposed roadway will result in a faster rate of runoff during a rainstorm. Water will be conveyed away from the road using primarily a system of open grassed swales or, in some instances, paved ditches and/or pipe. Appropriate Best Management Practices for control of erosion and sedimentation both during and after construction would be implemented.

PUBLIC WATER SOURCES: The IDEM has identified Lafayette as the only community in the project area with a state-certified Wellhead Protection Program (WHPP) for public water sources. The WHPP boundary does not extend into the project area. According to the city's water utility representatives, the project would not impact the city's potable water service resources. The Delphi Water Works Department is preparing a WHPP, the boundaries of which will likely extend into the Deer Creek Commerce Center. If so, the build alternatives (on shared alignment) would traverse a portion of the proposed WHPP area. The alignment would not be located near the source reservoirs or well fields that are the sources of the utility's water supply. Logansport Municipal Utility has submitted a WHPP to the IDEM for review and approval. All SR 25 build alternatives traverse a portion of the proposed WHPP area. The utility representative indicated that the build alternatives are not near the reservoirs or well fields that are the sources of the utility's water supply.

WETLAND IMPACTS—Alignments were shifted or eliminated in an effort to avoid or minimize impact to wetlands. However, constraints including historic properties and district, Delphi Swamp, and Americus Fen, as well as requirements related to roadway configurations and design standards, limited the alignment options. The total area of wetlands impacted directly would range from approximately 1.5 acres (Alternative 3) to 2.6 acres (Alternative 2). The project avoids both the Americus Fen and Delphi Swamp. Indirect impacts could occur should the new road 1) leave wetland remnants outside the right-of-way that are too small to be viable, or 2) disrupt a wetland's water source. It is not likely that all direct or indirect impacts can be avoided. If a build alternative is selected as the preferred alternative, then measures to minimize impacts to specific wetland sites can be studied as the roadway design is refined. Mitigation will occur in accordance with the 1991 Memorandum of Understanding (MOU) signed by the USFWS, INDOT and IDNR. The MOU established standard mitigation ratios for impacts to wetland resources.

PERMITS—A USACE Individual 404 Permit, an Individual 401 Water Quality Certification from the IDEM, and an IDNR Construction in a Floodway Permit would likely be necessary to construct any of the build alternatives. Detailed permit coordination would occur during the design phase of the project. The Individual Permit would include a detailed mitigation and monitoring plan for wetland and stream impacts.

WATER BODY MODIFICATION AND WILDLIFE IMPACTS—No modifications to or relocations of channels are currently proposed. The intent is either to bridge creeks and tributaries, or to place culverts in existing channels. Where stream crossings would occur, mitigation for impacts to fish and wildlife habitats will be developed in accordance with IDNR and USACE guidelines.

IMPACTS TO FEDERALLY THREATENED/ENDANGERED SPECIES—Federally endangered Indiana bats (*Myotis sodalis*) were captured along Sugar Creek (crossed by all build alternatives) during field surveys, and habitat suitable for maternity colonies of Indiana bats exists along area creeks. If a build alternative is selected as the preferred option, a Biological Assessment (BA) will be prepared for the Indiana bat and included in the *FEIS*. If required, formal consultation with the USFWS will be coordinated and Section 7 clearance will be sought for that species where an adverse effect cannot be avoided. Steps that might be required to minimize impacts could include limiting tree removal to areas needed for the construction, and confining tree removal to a time of year that would not conflict with the summer roosting season.

FLOODPLAIN IMPACTS—The proposed project crosses the 100-year flood plain of Buck Creek, Sugar Creek, Deer Creek, and Rock Creek. Proposed bridges would be designed to "pass" the 100-year floodway volume, with adequate clearance, under the structures. As a result, there would be no significant impacts on natural and beneficial floodplain values; no significant change in flood risks; and no significant increase in potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

HAZARDOUS MATERIALS—A Phase I environmental assessment identified 23 potential hazardous materials sites within or near the right-of-way of one or more build alternatives, and detailed investigations are deemed warranted at four sites. Should an alternative be selected that impacts one or more of the sites, and if necessary, Phase II investigations will be conducted before the completion of the *FEIS*, and mitigation measures will be identified.

VISUAL IMPACTS—The project traverses rural and urban environments and presents viewsheds typical of both and neither unique nor remarkable, with one exception—in the vicinity of Delphi, along Deer Creek, where bluffs, the creek, and forested areas present a scenic natural landscape that is distinctive, attractive and unique to the project corridor. This scenic area contains several historic structures and farms that have been included in the NRHP-eligible Rural Historic District. None of the alternatives would traverse historic properties; however, the build alternatives share an alignment that crosses Deer Creek and has a visual impact on the district.

CONSTRUCTION IMPACTS—Construction activities would have air, noise, water quality, and traffic flow impacts for businesses and travelers in the vicinity of the proposed project. During construction, measures to minimize impacts would be controlled in accordance with INDOT *Standard Specifications.*

ARCHAEOLOGICAL AND HISTORICAL PRESERVATION—

ARCHAEOLOGICAL: Archaeological records reviews, a Phase Ia field reconnaissance of the project's Central Segment, and an assessment of probabilities in the Western, Eastern and Logansport Segments revealed a high probability for, or actual occurrence of, numerous archaeological sites in the overall project area, particularly along rivers and creeks. The build alternatives have been located to avoid or minimize potential impacts to sensitive areas/sites. Through the Western Segment, the build alternatives are relatively far from the most probable location of sensitive resources—the Wabash River. Thus, their potential for impacting notable archaeological resources was deemed less than that of alignments farther north (eliminated from consideration). In the vicinity of Delphi, the build alternatives share a common alignment that avoids the archaeological sites but traverses an alluvial soils area. Further investigation of this area was recommended. East of Delphi, Alternatives 3 and 4 share an alignment south of existing SR 25 and the railroad, away from potentially sensitive areas north of existing SR 25 along Rock Creek. The alignment of Alternatives 1 and 2 is north of existing SR 25 where greater potential for impacts along Rock Creek exists. The State Historic Preservation Officer (SHPO) has concurred with the Phase 1a report's recommendations. A Phase Ia archaeological field reconnaissance is now being conducted along those segments for which the assessment, only, was performed. The reconnaissance and further investigation of the alluvial soils area will be completed prior to the completion of the *FEIS*.

HISTORICAL: A survey of aboveground historic resources identified several sites within the area of potential effect (APE) of the four build alternatives: two of the sites are listed on the National Register of Historic Places, and four are eligible for listing. In addition, an area east of Delphi was identified as an NRHP-eligible Rural Historic District. Alignments that would have encroached upon boundaries of NRHP-listed or -eligible resources were eliminated or modified to avoid direct impacts. Several of the resources would experience adverse visual effects owing to their proximity to a build alternative. The degree of the impacts will depend on each resource's distance from the alternative causing the impact. In all cases, the referenced alternatives would impact the resources equally since, in the vicinity of the resources, the alternatives that would have an effect share a common alignment. None of the build alternatives would substantially impair the activities, features, or attributes of the resources. Therefore, there is no Section 4(f) involvement. Once a preferred alternative is selected, a meeting will be conducted with the SHPO, federally recognized Native American tribes, and the other "consulting parties" to identify and evaluate potential means of mitigating adverse effects. The goal of the consultations will be a Memorandum of Agreement (MOA) documenting modifications or mitigation measures considered appropriate.

Table S-2—Comparative Impacts Summary: No-Build and Build Alternatives

Impacts	No-Build	Build Alternative 1 O-WA+P-CA1+P-EA+Y-LA	Build Alternative 2 O-WA1+P-CA1+P-EA+Y-LA	Build Alternative 3 O-WA+P-CA2+P-EB+Y-LB	Build Alternative 4 O-WA1+P-CA2+P-EB+Y-LB
Length (miles)	0	35.3	35.4	35.2	35.3
Estimated construction cost (millions)	0	$182.3	$188.4	$178.4	$184.5
Land use: Additional acres of ROW required	0	1,508	1,529	1,513	1,534
Farmland impacts:	No effect				
Agricultural acres required for ROW	0	1,168	1,171	1,215	1,218
Prime/Unique Farmland acres in ROW	0	866	877	976	987
Social:					
Travel time, community access, etc.	Road deficiencies, traffic, and slow travel time increase costs and reduce ease, safety of local/regional access.	Improves travel time and costs, improves area/regional access.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Crossroads closed to through traffic at new SR 25 (some changes in local travel patterns)	0	11	11	16	16
Railroad crossings eliminated	0	13	17	12	16
Special groups/unique communities	No effect	No effect. (Alignment not near local German Baptist Community.)	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Relocations / displacements:					
Residential	0	32 single-family, 2 multi-family	26 single-family, 2 multi-family	25 single-family, 2 multi-family	19 single-family, 2 multi-family
Commercial	0	5	5	7	7
Institutional	0	1	1	1	1
Economic	Increased traffic and reduced road capacity impair development potential and increase travel costs.	Improved travel time, safety, and local/regional access increase development potential and employment opportunities. Provides new access to Delphi, improved access to Logansport.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Pedestrians and bicyclists (trails crossed)	0	Crosses 3 bikeways in road ROW: access maintained except on CR 900N, to be relocated. Crosses 3 proposed hiking trails not open to public: access could be maintained. No Section 4(f) involvement.	Crosses 3 bike routes in road ROW: access maintained on all. Crosses 3 proposed hiking trails not open to public: access could be maintained. No Section 4(f) involvement.	Same as Alt. 1	Same as Alt. 2
Air quality	Some reduction in quality over time.	Steadying traffic flow by reducing number of access points and railroad crossings would reduce vehicle-related pollutants. No exceedance of standards projected.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Noise	Noise levels increase as traffic volume increases and road capacity is exceeded. Increase at one NRHP-eligible resource.	Notable decrease in noise along existing SR 25 at all but one monitored site near I-65, where minimal (3 dBA) increase over existing/No-Build is projected.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 2
Energy	No effect.	Major one-time energy resources demand. Improved access, travel time, safety make operational costs less than or equivalent to No-Build.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1

Table S-2—Comparative Impacts Summary: No-Build and Build Alternatives (Continued)

Impacts	No-Build	Build Alternative 1 O-WA+P-CA1+P-EA+Y-LA	Build Alternative 2 O-WA1+P-CA1+P-EA+Y-LA	Build Alternative 3 O-WA+P-CA2+P-EB+Y-LB	Build Alternative 4 O-WA1+P-CA2+P-EB+Y-LB
Water quality, related impacts:					
Stream crossings (incl. intermittent)	0	40	42	40	42
Bridges (Stream / Railroad / Highway)	0	5 / 5 / 5	5 / 9 / 5	5 / 4 / 4	5 / 8 / 4
Length of stream impact (feet)	0	15,600	15,500	15,800	15,700
General impacts	No change in existing conditions.	Possible short-term increase in stream sedimentation, groundwater turbidity during construction. Roadway pollutants introduced along new alignment. Grass swales, pipes proposed.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Wetland areas within ROW (acres)	0	2.3	2.6	1.5	1.8
Permits	None	USACE 404, IDEM 401, IDNR Construction in a Floodway	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Water body modifications/wildlife	No effect	No effect	No effect	No effect	No effect
Endangered species	No effect	Indiana bats captured on Sugar Creek and habitat exists through project corridor.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Floodplains (acres)	0	25	25	21	21
Wild and scenic rivers	None in area	None in area	None in area	None in area	None in area
Potential HAZMAT sites	No effect	12	11	11	10
Visual	No effect	Pleasant view from the road through rural areas.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Construction	No effect	Temporary dust, noise, traffic delays, water quality impacts.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Cultural resources					
Archaeological resources (eligible/ listed on National Register of Historic Places)	No effect	Traverses portion of one alluvial soils area.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1
Historic properties (eligible/ listed on NRHP)	Increase over existing noise level at an NRHP-eligible resource.	Visual impact to eligible Historic District and 3 eligible sites (north of existing SR 25).	Same as Alt. 1	Visual impact to eligible Historic District, 1 listed site (north of existing SR 25) and 2 eligible sites (south).	Same as Alt. 3
NOTE: Section 106 coordination on-going. No Section 4(f) involvement expected.					
Long-term impacts	Would not improve accessibility and safety, travel time, economic development potential.	Completes a link in the Hoosier Heartland corridor; enhances long-term productivity in area and region.	Same as Alt. 1	Same as Alt. 1	Same as Alt. 1

Abbreviations Key:

ROW = Right-of-way

HAZMAT = Hazardous materials

USACE = U.S. Army Corps of Engineers

IDEM = Indiana Department of Environmental Management

IDNR = Indiana Department of Natural Resources

Section 4(f) = A section of the Department of Transportation Act (1966) requiring avoidance of certain resources (such as public parks and recreational areas, historic and archaeological sites, wild and scenic rivers, or wildlife management areas) when a feasible alternative is possible.

Section 106 = A section of the National Historic Preservation Act (1966), as amended, requiring the federal government to "take into account" the effect of its proposed actions on archaeological and historic resources before making project decisions.